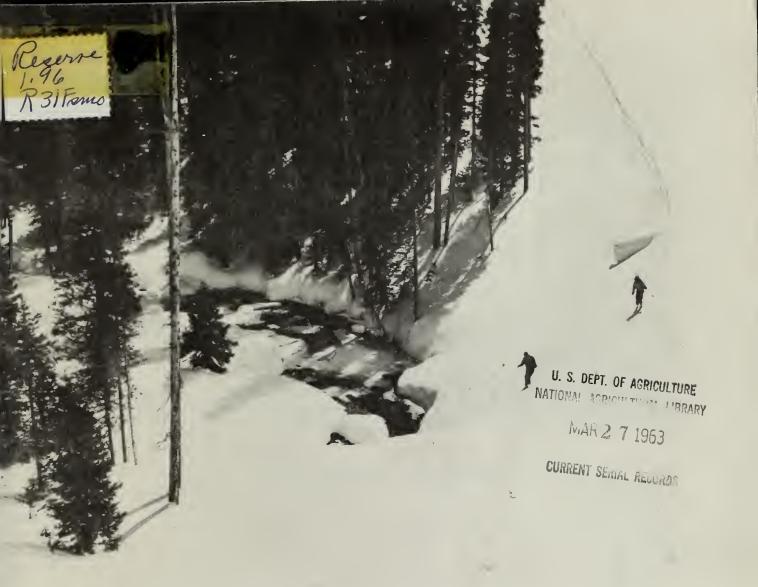
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.





WATER SUPPLY OUTLOOK

rederal - State - Private Cooperative Snow Surveys

for

MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE, and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed on the last page of this report MAR. 1, 1963

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 4170, Portland 8, Oregon.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	. MONTHLY (FEBMAY)	PORTLAND, OREGON	. ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MARMAY)	PALMER, ALASKA	ALASKA S.C.D.
AR I ZONA	SEMI-MONTHLY (JAN.15 - APR.1)		.SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO ANO NEW MEXICO	MONTHLY (FEBMAY)	FORT COLLINS, COLORAGO	.COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
I DAHD	(JANJUNE)	BOISE, IDAHO	. IOAHO STATE RECLAMATION ENGINEER
MONTANA	(ANUL-:NAL) YHTNOM _	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NE V A D A	(YAMNAL)	RENO, NEVAOA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
ORE GON	MDNTHLY (JANJUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	(ANDLNAL) YJHTNOM	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON-	MONTHLY (FEBJUNE)	SPOKANE, WASHINGTON	. Wn. STATE DEPT. OF CONSERVATION
WYOM!NG	MONTHLY (FEB. JUNE)	CASPER. WYOMING	.WYOMING STATE ENGINEER
		OTHER AGENCIES	
REPORTS	ISSUED		AGENCY
BRITISH COLUMBIA	MONTHLY (FEBJUNE)	WATER RIGHTS BR. NATURAL RESOURCES B.C., CANADA	, DEPT. OF LANOS, FORESTS AND S, PARLIAMENT BLDG., VICTORIA,
CALIFORNIA	MONTHLY (FEBMAY)	CALIF. DEPT. OF V SACRAMENTO, CALIF	WATER RESOURCES, P.O. BOX 388,

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared By

P. E. Farnes Acting Snow Survey Supervisor

Soil Conservation Service Snow Survey Section Box 855, Bozeman, Montana

Issued By

H. D. Hurd
State Conservationist
Soil Conservation Service
Bozeman, Montana

J. A. Asleson
Director
Montana Agricultural
Experiment Station
Bozeman, Montana



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MONTANA WATER SUPPLY OUTLOOK February 1, 1963

Streamflow is expected to be 15 to 25 percent below average on the Kootenai, Flathead and Clark Fork River drainages. Headwater streams in the Upper Clark Fork basin are forecast to flow 5 to 15 percent less than average. Some late season shortage of irrigation water can be expected in the Bitterroot drainage, particularly those streams originating on the west side of the valley.

East of the Continental divide, streamflow is forecast to be 50 to 60 percent of average on the Red Rock-Beaverhead drainage, tributary streams to the Madison River, and on the Marias River drainage. Other drainages are expected to produce 60 to 90 percent of average flow with the exception of the Gallatin and Musselshell Rivers where near average streamflow is forecast.

Snow surveys made near the first of March indicate the mountain snow pack in the Kootenai River drainage is 76 percent of last year and 65 percent average. In the Flathead drainage it is 71 percent of last year and 69 percent average. The Lower Clark Fork area has a 69 percent average pack, which is 65 percent of last year. In the Upper Clark Fork basin, the mountain snow is 8 percent less than last year and 5 percent below the 1943-57 average. The Bitterroot drainage is covered with a deficient snow pack, being only 64 percent of last year and 61 percent of average.

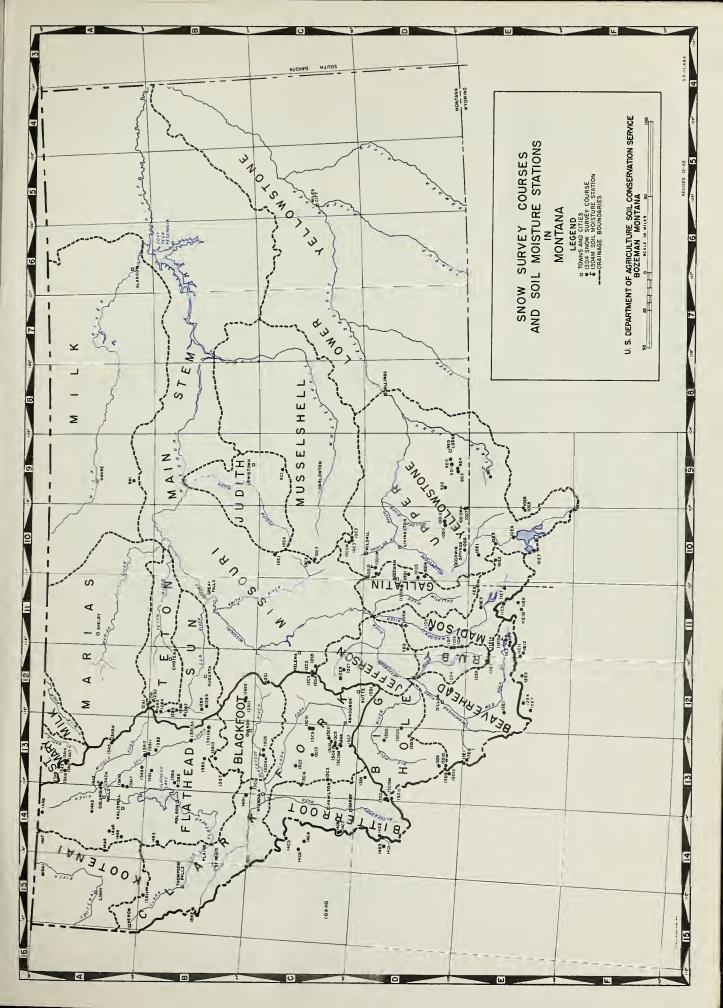


East of the Continental divide, the Jefferson River drainage has a snow pack that is 72 percent of last year and 71 percent average, with better conditions present on the north portion of the drainage. The Madison basin has a cover of only 49 percent of last year and 56 percent of average. In the Gallatin the pack is 77 percent of last year and 94 percent average. Along the main stem of the Missouri the snow pack is 82 percent of last year and 79 percent average. Farther north, in the Sun, Teton and Marias drainages, there is only 56 percent of last year or one-half average snow pack. The Musselshell-Judith area has nearly the same amount of snow as last year and is 8 percent above the average. The Yellowstone drainage has a snow cover that is 71 percent of last year and 80 percent average.

Irrigation reservoir storage is generally near average with the exception of the Marias and Milk River basins where storage is below average.

Storage in power and multi-purpose reservoirs is generally above average.





INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

INDEX	TO	HONTANA	SNOW	COURSES	AND	SOIL	MOISTURE	STATIONS
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Dreinage Basin			Location Sec.		Range	Record	Heseuring,	Meeaured By 2
4 Course Naze	Number	Elev-	Let.	Twp.	Long.	Began	Dates I/	By 2/
			COLUMBIA	RIVER BAS	IN			
KOOTENAI RIVER Beree Creek	15811	5500	6	25N	30W	1937	4.5.54	2
Brush Creek Red Mountain	14A4 15A1	5000 6000	13	30N 36N	26W 29W	1937 1937	4,5, 52 3,4,5 3,4,5, 52 ,6 3,4,5, 52 ,6	1,2 1,2 1,2
Weasel Oivide	1447	5450	8	37N	249	1937	3,4,5,52,6	1,2
FLATHEAD RIVER								
Basin Creek Bassoo Peak 818 Creek	13814A 1483 1383	5000 5150 6750	11 11 7	19N 24N 22N	12W 25W 16W	1951 1960 1941	2,3,4,5 3,4,5 3,4,5 6	1,5
Camp Misery Desert Mountain	13A17 13A2	6400 5600	30 24	28N 31N	18W 19W	1962 1937		1,5 1,5 1,2 1,2
Fetty Creek Griffin Creek Divide	13B4 14A9	5500	11	22N 28N	18W 25W 22W	1962 1960	3,4,5, 6	1,0
Sell Roaring Divide Bolbrook	14A3 13813A	5150 5770 4530	35 18	32N 21N	13W	1942 1951	3,4,5, 5½ ,6 2,3,4,5 3,4 3,4,5	1
Kishenehn Logen Creek	14A6 14A5	3886 4300	14 34 34	37N 30N	22W 24W	1954 1937	3,4 3,4,5	6 1,2
Mariae Pess Mineral Creek	13A5 13A16	5250 4000	29	30N 35N	14N 17N	1934 1939	3,4	6
North Fork Jocko Quintonkon	13B7 13A13 13B2	6330 3800 7000	3 11 23	17N 26N 25N	17W 17W 15W	1941 1951 1948	3,4,5,7 2 ,0	1,5 1,2 1,2
Spetted Bear Mt. Strewberry Lake Trinkus Lake	13A10 13B1	6500 6500	11 9	28N 25N	19W 17W	1948 1948	1,2,3,4,5	1,2
Trout Lake Twin Creeks	13A12 13811	3600 3580	21 14	28N 26N	17W 16W	1948 1951	3,4,5 3,4,5 1,2,3,4,5	1,2 1,2
Upper Hollend Lake	1385	7000	28	20N	16W	1948	3,4,5 3,4,5	î'
CLARK FORK RIVER								
Slack Plne Copper Creek Cotter Mine	13013 12810 12811	7100 5700 6250	23 1 2	8N 15N	15W 9W 9W	1959 1962 1962	3,4,5 3,4 3,4 1,2,3,4,5 3,4,5 3,4,5 3,4,5	1
Cotter Mine Coyote Hill El Dorado Mine	13B10 13C9	4200 7800	12	15N 18N 8N	16W 12W	1947	1,2,3,4,5	1,2
Fred Burr Pess Gold Creek Lake	13011 13010	8000 7200	23 12 14	6N BN	13W 12W	1957 1949	3,4,5	î
Hoodoo Creek Intergeerd	1501 1304	6200 6450	9	1.4N 5N	27W 13W	1937	3,4,5	1,2
Lubrecht Forest #6 Red Lion	1308 13012	4040 7000	11 27	1.3N 6N	14N 13W	1951 1958	3,4,5 2,3,4,5 3,4,5 3,4,5,5½,6 3,4,5,5½,6	8
Skelkaho Summit Slide Rock Mt.	1303 1302	7259 7100	30 35	6N 10N	17W 16W	1937 1937	3,4,5,5½,6 3,4,5	1
Southern Cross Storm Lake	1305 1307 1306	6500 7780	8 19 19	5N 4N	13W 13W 13W	1936 1939 1936	2,3,4 1,2,3,4,5 2,3,4 1,2,3,4,5	1
Stuart Mill T.V. Mountain	1481	6500 6800	33	5N 15N	19W	1956	1,2,3,4,5	1
BITTERROOT RIVER								
Ambrose East Pork R.S.	13016 1301	6475 5400	28 16	9N 2N	18W 17W	1960 1937	3,4,5 3,4 1,2,3,4,5, 52 ,6	1
Gibbons Pess Lost Horse	13D2 14C7	7100 5940 5580	4 5 19	2S 4N	19W 23W 23W	1934 1960	1,2,3,4,5, 52 ,6 3,4,5	1,3
Nez Perce Camp Nez Perce Pess Twin Lakes	1402 1401 1408	6575 6510	25 32	1S 1S 5N	23W 23W	1937 1937 1960	3,4,5 3,4,5 3,4,5 3,4,5 3,4,5	1 1 1
I III AEAVS	1400	0,10		WAN RIVER		2700	2,4,2	•
ST. MARY RIVER								
Iceberg Lake #3 Josephine Lower #9	13A3 13A14	5600 4900	34 10	36N 35N	16W 16W	1922 1955	5	3,9 3,9 3,9
Mount Allen #7 Fiegen Pese #6	13A7 13A6	5700 5500	22 15	35N 35N	16W	1922	5	3,9
Ptermigen #8	1348	5800	32	36H	16M	1937	5 5	3,9 3,9
			MISSOURI	RIVER BA	SIN			
BEAVERHEAD RIVER								
Sloody Oick Carter Creek	13010 12D4	7600 7400	12 22	8S 8S	16W 7W	1948 1963	3,4 3,4 3,4,5	1
Gold Stone Lakeview Cenyon Lakeview Ridge	1309 11E4 11E3	6930 7400	11 26 27	85 143 145	16W 2W 2W	1948 1948 1948	3,4,5	1 10 10
Lombi Pess Treil Creck	13E1 13E2	7480	9	10S 10S	15W 15W	1948 1948	3,4,5 3,4 3,4	1
White Fine Rldge	12E1	8850	18	145	9W	1948	3,4,5	ī
RUBY RIVER								
Clover Meadow Oivide	11D8 12E7	8600 7900	28 14	9S 12S	2W 4W	1963 1963	3,4,5 3,4,5 3,4,5	1
Noteh	12E6	8500	18	15	414	1963	3,4,5	1
BIG HOLE RIVER Abundance Lake	13020	8800	7	3s	12W	1963	3,4,5	1
Oarkhorse Lake Elk Horn Springs	13D19 13O15	8600 8000	4 15 14	8S 4S	16W 12W	1963 1935	3,4,5	1
Foolhen Jahnke Creek	13D21 13D8	8500 7340	14	1S 7S	13W 16W	1963 1948	3,4,5 3,4,5 3,4,5 3,4,5	1
JEFFERSON RIVER								
Berry Meadow	1207	7300	17	5N	5W	1962	3,4	1
Picnic Grounds Pipestons Pess	1206 1201	6500 7200	10 10	5N 1N	6W 7W	1941 1938	2,3,4 1,2,3,4,5	1

L/Missouri River Basin_cont'd											
Dreimage Basin & Course Name	Number	Elev.	Location Sec.	Tvo.	Range Long.	Record Began	Measuring Dates	Measure By 2			
MADISON RIVER											
Cell Road Crockett Lake Hebgen Dam Jeck Creek North Headow West Yellowstone	11D7 11D6 11E5 11D5 11D3 11E7	8050 8400 6550 6800 7500 6700	21 20 22 13 23 34	85 85 115 65 35 135	2W 2W 3E 1E 3W 5W	1962 1962 1934 1961 1961 1934	3,4,5 3,4,5 1,2,3,4,5 3,4 3,4 1,2,3,4,5	1 1 3 1 1			
GALLATIN RIVER											
Devil [‡] a Slide Hood Meadow New World Twenty-One Mile	1004 1003 1001 11E6	8190 6600 6700 7150	14 22 24 1	55 45 38 115	6E 6E 6E 5E	1935 1935 1939 1934	2,3,4,5, 2,3,4,5 2,3,4 1,2,3,4,5	5 1 1 1 3			
MISSOURI RIVER MAIN S	STEM										
Chessman Reservoir Crystel Lake Elk Peak Greeshopper Kinge Hill Rocky Boy Stemple Pess Ten Mile Creek L. Ten Mile Creek M. Ten Mile Creek U.	1205 901 1007 1002 1001 9A1 1201 1202 1203 1204	6200 6100 8000 7000 7500 5200 6900 6250 6800 8000	2 19 10 19 35 15 16 13 13	8N 12N 8N 9N 13H 28N 13N 8N 8N	5W 18E 8E 8E 7E 16E 7W 6W 6W	1936 1941 1963 1938 1934 1941 1934 1935 1934	1,2,3,4,5 3,4 3,4 3,4,5 3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5	3 1 1 3 7 3 3 3			
SUN-TETON-MARIAS RIVE	ERS										
Benchmark Cebin Creek Five-Bull Preight Creek Getes Perk Gost Mountein Weldron Creek West Fork Wrong Creek Wrong Ridge	12B8 12B6 12B9 12A1 12B5 12B7 12B2 12B1 12B4 12B3	5500 5400 5600 6000 5300 7000 5600 6000 5700 6800	9 33 36 13 31 20 16 6 32 17	20N 23N 20H 26N 24N 22N 25N 25N 25N 25N	10W 10W 10W 10W 10W 10W 9W 9W 10W 10W	1948 1949 1948 1948 1949 1934 1948 1948 1949	3,4 3,4 3,4 3,4 3,4,5 3,4 3,4	1 1 1 1 3 1 1 1 1 1 1 1			
JUDITH RIVER											
Spur Perk	1006	8000	20	12N	9E	1963	3.4	1			
UPPER YELLOWSTONE RIT		0000	20	2011	,,,	2703	-,-	-			
Beld Ridge Casp Senia Cocke City Crewice Mt. Gertrude Lake Grizzly Peak Independence Homment Feak Forcupine R.S. Timberline Creek Saccjewes West Rosebud	1005 901 1007 1005 903 905 1006 10012 1003 904 10010 902	7500 7890 7400 8400 9250 8400 8000 9000 6500 8850 6550 7500	11 2 25 22 10 26 22 22 22 10 10 36 10	4N 85 95 95 85 75 75 75 4N 85 2N	108 18E 14E 9E 18E 19E 12E 12E 10E 18E 6E	1961 1937 1937 1935 1961 1961 1940 1961 1938 1961 1960 1960	3,4 3,4,5 1,2,3,4,5 3,4,5 1,2,3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5	1 1 6 2 1 1 1 1 1 1 1 1 1 4			
			COLUMBIA	RIVER BA	SIN						
FLATHEAD RIVER Desert Mountein Heries Pess	13A2H 13A5H	5600 5250	24 34	31N 30N	19V 14W	1956 1950	Monthly Monthly	1			
CLARK FORK RIVER											
Georgetowe Lake Lubrecht Forest BITTERROOT RIVER	13015H 13014H	6450 4100	6	5N 13N	13W 15W	1962 1961	Monthly Monthly	8			
Gibbone Pess	130184	7100	4	25	19W	1962	Monthly	1			
Giocotta Less	130100	7100	-			1700	Houelity	-			
			MISSOURI	RIVER BA	SIN						
BEAVERHEAD RIVER											
Lakeview	11E13M	6700	23	148	24	1962	Monthly	10			
MADISON RIVER Red Bluff	11D4M	4800	7	3\$	1E	1961	Honthly	7			
GALLATIN RIVER											
College Site	1102M	4856	18	25	5E	1956	Monthly	1			
YELLOWSTONE RIVER											
Battle Ridge Northeast Entrence Shields River	10011M 10013M 1004M	6020 7350 5850	32 33 3	2N 9S 4N	7E 145 10E	1960 1962 1960	Monthly Monthly Monthly	1 6 1			

✓ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, Merch 1, April 1, May 1, May 15 and June 1.

^{2/} Numerals refer to Agency that secures the snow survey as follows:

^{1.} Soil Conservation Sorvice 6. National Park Service 2. U. S. Forest Service 7. Montena Experiannt Station 3. U. S. Goolegical Survey 8. Montana Exter Forestry School 4. Montana Fover Company 9. Dominion Water & Fover Bursau 0. U. S. Haha and Wildliffe Service 10. U. S. Taha and Wildliffe Service

M - Soil Moisture A - Aerial Marker

	AS OF M	ARCH 1, 1961	3		(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	COLUM	BIA RIVER BA	ASIN			
	MOOMENAT DIVIND					
3030	KOOTENAI RIVER Libby (at)	Apr-Sept	5844	76	6632	7723
5050	21003 (4.0)	Apr-July	4987	75	5707	6694
3050	Leonia (at)	Apr-Sept	6633	74	7605	8907
	Wanner	Apr-July	5739	73	6603	7817
2555	NORTH FORK FLATHEAD RIVER	A	7.45/	~~	2/70	7040
3555	Columbia Falls (near)	Apr-Sept	1456	75 76	1678	1942
		Apr-July Apr-June	1342 1140	76 76	1540 1356	1769 1491
	MIDDLE FORK FLATHEAD RIVER	npi ounc	1140	70	1990	14/1
3585	West Glacier (near)	Apr-Sept	1498	80	1702	1882
		Apr-July	1390	80	1582	1747
	GOVERN TORK TO SEE THE	Apr-June	1183	80	1402	1487
3625	SOUTH FORK FLATHEAD RIVER		7046	۵.	01/~	0000
2025	Columbia Falls (nr)(17)	Apr-Sept	1946 1840	85	2465	2297
		Apr-July Apr-June	1620	85 85	2358 2132	2180 1901
	FLATHEAD RIVER	npr ound	10~0	0)	~1)~	1/01
3630	Columbia Falls (at)(17)	Apr-Sept	5038	80	6030	6299
		Apr-July	4668	80	5631	5846
0700	D D () (- 1)	Apr-June	4012	80	5009	4993
3720	Polson (near)(18)	Apr-Sept	5987	80	7073	7463
		Apr-July	5557	80	6614	6939
	SWAN RIVER	Apr-June	4730	80	5880	5896
3700	Big Fork (near)	Apr-Sept	582	91		641
	, (<u>,</u>	Apr-July	515	91		568
		Apr-June	419	91		460
0.400	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	881	88	1090	1000
		Apr-July	787	87	993	907
	FLINT CREEK	Apr-June	670	87	877	775
3295	Maxville (at)	Apr-Sept	42.0	90	39.1	46 .4
	(4.7)	Apr-July	32.0	90	27.8	35.4
	BOULDER CREEK			·		2204
3300	Maxville (at)	Apr-Sept	24.8	88	24.8	28.2
	WIDDLE HODY BOOK SERV	Apr-July	22.8	88	22.7	25.8
3320	MIDDLE FORK ROCK CREEK Philipsburg (near)	Ann Carat	71.1	0.3		00.0
)) _L U	Initithandia (Heat.)	Apr-Sept Apr-July	74.4 67.0	93 93		80.2 72.1
		Thi outh	0,,0	7,7		1 K o L

⁽¹⁷⁾ Corrected for storage in Hungry Horse Reservoir.

⁽¹⁸⁾ Corrected for storage in Hungry Horse Reservoir and Flathead Lake.

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^{*}PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY



					(1000	Acre Feet)
	(FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	704	86	769	815
		Apr-July	619	86	677	716
		Apr-June	523	86	590	609
3405	Missoula (above)	Apr-Sept	1585	87	1859	1814
		Apr-July	1406	87	1660	1620
		Apr-June	1193	86	1467	1384
3530	Missoula (below)	Apr-Sept	2613	78	3323	3361
		Apr-July	2368	78	3025	3059
		Apr-June	2018	77	2686	2608
3545	St. Regis (at)	Apr-Sept	3405	75	4416	4549
		Apr-July	3070	74	4013	4140
		Apr-June	2617	74	3566	3550
3890	Plains (near)(18)	Apr-Sept	9660	78	11956	12337
		Apr-July	8744	77	11030	11316
		Apr-June	7450	77	9775	9625
3920	Whitehorse Rapids (at)(19)	Apr-Sept	10792	77	13324	13932
		Apr-July	9800	77	12244	12763
		Apr-June	8313	77	10846	10816
	WEST FORK BITTERROOT RIVER	-				
3425	Conner (near)(15)	Apr-Sept	139	79		176
		Apr-July	130	79		164
	BITTERROOT RIVER					
3440	Darby (near)	Apr-Sept	430	73	548	587
		Apr-July	398	73	510	547
		Apr-June	348	73	459	477
3528	Missoula (near)(16)	Apr-Sept	1028	66	1464	1557
		Apr-July	962	66	1365	1450
		Apr-June	825	66	1219	1244
	BLODGETT CREEK	•				
3475	Corvallis (near)	Apr-Sept	41.2	88		46.7
		Apr-July	39.2	88		44.4

⁽¹⁴⁾ Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner.

⁽¹⁵⁾ Corrected for storage in Painted Rocks Reservoir.

⁽¹⁶⁾ Difference in observed flow, Clark Fork above and below Missoula.

⁽¹⁸⁾ Corrected for storage in Hungry Horse Reservoir and Flathead Lake.

⁽¹⁹⁾ Corrected for storage in Hungry Horse, Flathead Lake and Noxon Reservoirs.

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PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY



					(1000	(cre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AYERAGE	LAST YEAR*	AVERAGE
	MISSO	URI RIVER B	ASTN			
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	Apr-Sept	42.2	55	106	76.6
	· ·	Apr-July	38.9	55	97	70.8
0125	Monida (near)(1)	Apr-Sept	43.7	51	110	86.4
		Apr-July	41.4	50	101	82.2
	BIG HOLE RIVER					
0255	Melrose (near)	Apr-Sept	650	85	671	770
		Apr-July	602	85	619	714
	BOULDER RIVER					
0330	Boulder (near)	Apr-Sept	69.3	87		79.9
		Apr-July	66.4	87		76.5
	JEFFERSON RIVER					
0345	Sappington (at)	Apr-Sept	817	76		1074
	MADICON DIVID	Apr-July	726	76		958
0.255	MADISON RIVER			4.0		
0375	West Yellowstone (near)	Apr-Sept	177	82		216
0205	0	Apr-July	134	81		165
0385	Grayling (near)(2)	Apr-Sept	346	77		448
0410	McAllister (near)(3)	Apr-July	273	77		357
0410	MCAILISter (near)(3)	Apr-Sept	575	76		756
	GALLATIN RIVER	Apr-July	465	76		613
0435	Gateway (near)	Apr-Sept	430	94		150
0427	dateway (hear)	Apr-July	372	94		459
	HYALITE CREEK	Apresury	312	94		395
0500	Hyalite R. S. (at)(4)	Apr-Sept	39.8	110		36.1
0,00	11341110 11. D. (a)/(4)	Apr-July	34.3	110		31.0
	GALLATIN RIVER	whi-outh	74.7	110)1.U
0525	Logan (at)	Apr-Sept	438	96		492
0,2,	208411 (40)	Apr-July	381	96		422
		TIPL OULY	701	/5		422

Corrected for storage in Lima Reservoir.
 Corrected for storage in Hebgen Lake.
 Corrected for storage in Hebgen and Ennis Lakes.
 Corrected for storage in Middle Creek Reservoir.



AS OF MARCH 1, 1963

					(1000	(cre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(3)	Apr-Sept	1813	77		2342
		Apr-July	1560	77		2030
0908	Fort Benton (at)(5)	Apr-Sept	2590	72		3599
		Apr-July	2204	72		3076
1095	Virgelle (at)(6)	Apr-Sept	3024	69		4393
77.00		Apr-July	2624	69		3803
1150	Zortman (near)(6)	Apr-Sept	3357	70		4806
1 200	5 1 5 1 5 (1 3)(5)	Apr-July	2879	70		4143
1320	Fort Peck Dam (below)(7)	Apr-Sept	3126	66		4761
7.000	II 36 D : 1 ()(a)	Apr-July	2711	65		4181
1770	Wolf Point (near)(7)	Apr-Sept	3422	65		5261
3300	Williston, N.D. (nr)(8)	Apr-July	2971	64	7 2207	4652
3300	williston, N.D. (nr)(8)	Apr-Sept Apr-July	9623 8389	77	13381	12562 11101
	PRICKLY PEAR CREEK	Apr-July	0,009	75	11841	11101
0615	Clancy (near)	Apr-Sept	19.4	81		23.9
001)	oranoj (near)	Apr-July	17.0	82		20.8
	NORTH FORK SUN RIVER	Apr oury	17.0	υ <u>ν</u>		20.0
0785	Augusta (near)	Apr-Sept	171	72		239
	, , , , , , , , , , , , , , , , , , , ,	Apr-July	159	72		222
	SUN RIVER		-27	,		~~~
0786	Gibson Dam (at)(10)	Apr-Sept	436	74	616	588
		Apr-July	396	74	569	538
	MARIAS RIVER					
0995	Shelby (near)	Apr-Sept	401	61	419	659
		Apr-July	363	60	391	605
	SOUTH FORK MUSSELSHELL R.					
1185	Martinsdale (above)	Apr-Sept	54.0	100	49.8	53.6
	VIII DIVED	Apr-July	51.6	100	46.0	51.4
1250	MILK RIVER		7.0/	~~		
1350	Eastern Crossing (at)	Mar-Sept	186	73		255

(5) Corrected for storage in Canyon Ferry Reservoir.

and Boysen Reservoirs.

⁽³⁾ Corrected for storage in Hebgen and Ennis Lakes.

⁽⁶⁾ Corrected for storage in Canyon Ferry and Tiber Reservoirs.

⁽⁷⁾ Corrected for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Corrected for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill

⁽¹⁰⁾ Corrected for storage in Gibson Reservoir and diversions.



					(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	Apr-Sept	1699	86	2266	1980
	•	Apr-July	1422	86	1903	1649
1925	Livingston (near)	Apr-Sept	1943	86	2562	2252
		Apr-July	1612	86	2148	1863
2145	Billings (at)	Apr-Sept	3592	84	4577	4261
		Apr-July	3085	84	3854	3657
3090	Miles $City$ (at)(12)	Apr-Sept	5673	84	7114	6721
		Apr-July	4968	84	6170	5883
3295	Sidney (near)(12)	Apr-Sept	5860	85	8124	6921
		Apr-July	5166	84	7190	6137
	SHIELDS RIVER					
1935	Clyde Park (at)	Apr-Sept	95.0	86	85.9	111
		Apr-July	88.8	86	77.4	103
	STILLWATER RIVER					
2050	Absarokee (near)(11)	Apr-Sept	545	88	637	620
		Apr-July	461	88	519	523
0.05	CLARKS FORK RIVER					
2075	Chance (at)	Apr-Sept	506	82	622	617
		Apr-July	457	83	558	552
2085	Edgar (at)	Apr-Sept	526	81	678	652
		Apr-July	469	82	585	575
0005	ROCK CREEK			-4 -		
2095	Red Lodge (near)	Apr-Sept	97.5	87	107	112
		Apr-July	74.7	87	82.8	86.3

⁽¹¹⁾ Corrected for storage in Mystic Lake.(12) Corrected for storage in Buffalo Bill and Boysen Reservoirs.



SOIL MOISTURE DATA

AS OF MARCH 1, 1963 (Inches) PAST RECORD SOIL PROFILE CURRENT DATA SOIL MOISTURE STATION DATE SOIL LAST FIELD **AVERAGE DEPTH OF SURVEY MO ISTURE CAPACITY YEAR NO. NAME ELEVATION COLUMBIA RIVER BASIN Flathead 13A2M 2/26 Desert Mountain 6.3 7.1 5600 54 8.4 7.5 13A5M Marias Pass 6.5 2/27 5.6 5.3 5250 54 6.0 Clark Fork 13C15M Georgetown Lake 6450 48 8.3 2/28 3.1 Bitterroot Gibbons Pass 13D18M 7100 48 7.1 3/1 5.8 MISSOURI RIVER BASIN Beaverhead 11E13M Lakeview 6700 3/4 48 15.3 9.7 Madison 10D4M Red Bluff 4800 40 4.7 3/2 2.5 2.8 Gallatin 11D2M 54 9.0 4856 14.5 3/1 13.3 11.6 College Site Yellowstone 10D11M Battle Ridge 6020 15.4 2/27 13.8 48 14.3

9.4 1/

3/2

2/27

7.1

15.3

12.1

48

48

Northeast Entrance

Shields River

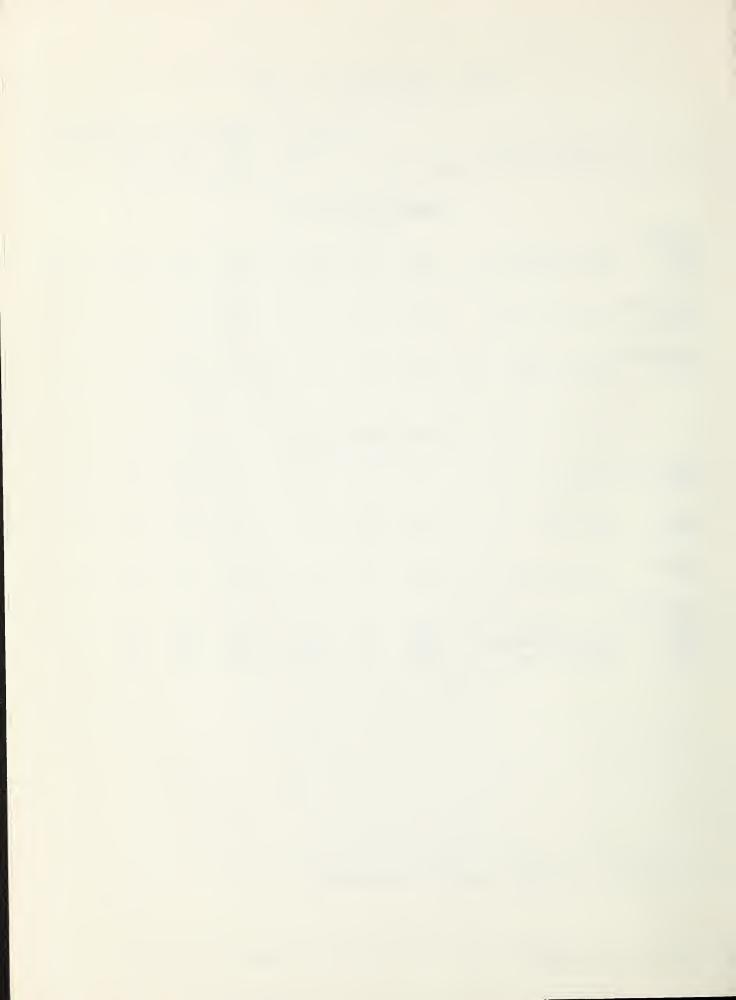
7350

5850

10D13M

10C4M

^{1/} Capacity and previously published revised data.



AS OF MARCH 1, 1963

		AS OF M	ARCH I, .	1903			(Inches)		
				CURRENT DATA	1	Y PAST RECORD			
	SNOW COURSE		DATE OF	SNOW	WATER	WATER	CONTENT		
NO.	NAME	ELEVATION	SURVEY		CONTENT	LAST YEAR	AVERAGE		
		COLIMBI	A RIVER I	RASTM					
		OOHOMBI	A ICIVIDIC I	DADIN					
KOOTENAI	RIVER								
14A4	Brush Creek	5000	2/21	22	5.2	10.2	13.4*		
Can 10	Fernie	3500	2/27	4	2.0	6.3	9.1		
Can 12A	Field	4200	2/27	20	4.5	4.8	5.5		
Can 43	Gray Creek	5100	2/27	50	14.3	16.1	16.7*		
Can 33	Kicking Horse	5400	3/1	47	11.9	10.9	13.3*		
Can 20B	Kimberley	3800	2/28	16	4.4	7.7	7.6		
Can 32	Marble Canyon	5000	2/28	41	7.0	10.8	13,2*		
Can 10B	Morrissey Ridge	6100		No Rej	port	21.0	en.		
Can 10A	New Fernie	4100	2/27	24	7.4	12.8	13.1*		
15A1	Red Mountain	6000	2/27	40	11.9	14.4	18.0		
Can 8A	Sinclair Pass	4500	2/28	14	2.9	4.6	5.7*		
Can 20A	Sullivan Mine	5100	2/27	35	9.2	11.3	13.1*		
Can 41	Upper Elk River	4400	2/28	6	2.7	4.5	8.2*		
14A7	Weasel Divide	5450	2/28	71	25.2	27.9	29.6*		
FLATHEAD	RIVER								
13B14A	Basin Creek	5000	2/22	12	4.0	11.3	9.2*		
14B3	Bassoo Peak	5150	2/25	16	5.0	11.0			
13B3	Big Creek	6750	2/28	94	35.0	38.4	36.6		
13A17	Camp Misery	6400	2/26	79	27.3	34.5			
13A2	Desert Mountain	5600	2/26	33	9.4	13.4	14.1*		
13B4	Fatty Creek	5500	2/28	44	14.3	19.0			
14A9	Griffin Creek Divide	5150	2/27	20	5.0	12.8	_		
14A3	Hell Roaring Divide	5770	3/1	69	22.0	23.0	26.9*		
13B13A	Holbrook	4530	2/22	19	6.4	13.4	9.9*		
14A6	Kishenehn	3886	2/25	19	5.9	8.5	10.5*		
14A5	Logan Creek	4300	2/21	19	4.4	9.4	9.0*		
13A5	Marias Pass	5250	2/27	30	9.5	13.4	17.4		
13A16	Mineral Creek	4000	2/28	36	10.6	15.1	20.4*		
13B7	North Fork Jocko	6330	3/1	105	34.4	43.0	38.3		
13A13	Quintonkon	3800	-, -	No Re		14.6	13.9*		
13B2	Spotted Bear Mt.	7000	2/22	28	7.6	13.6	14.8*		
13A10	Strawberry Lake	6500	2/22	66	23.3	31.8	33.7*		
13B1	Trinkus Lake	6500	2/22	72	24.2	34.0	36.3*		
13A12	Trout Lake	3600	2/25	23	7.5	13.3	15.4*		
13B11	Twin Creeks	3580	2/25	19	6.0	10.8	11.2*		
13B5	Upper Holland Lake	7000	2/22	67	20.0	34.5	28.4*		
	4.4		•				•		



MARCH 1, 1963 AS OF (inches) CURRENT DATA PAST RECORD SNOW COURSE DATE SHOW WATER WATER CONTENT DEPTH CONTENT NO. NAME ELEVATION SURVEY LAST YEAR AVERAGE CLARK FORK RIVER 13013 2/26 10.8 Black Pine 7100 35 10.7 13B10 Covote Hill 4200 3/1 28 7.4 11.8 9.9* 1309 2/25 17.9 El Dorado Mine 7800 52 17.4 17.3* 13011 Fred Burr Pass 68 21.2 19.6 22.4* 8000 3/1 2/25 13010 Gold Creek Lake 13.4* 12.3 13.0 7200 38 1501 Hoodoo Creek 6200 2/26 77 28.0 46.0 13C4 3/1 6.8 8.1 6.6 Intergaard 6450 29 15B2 2/28 60 33.7* Lookout 5250 19.3 31.4 1308 3/3 Lubrecht Forest #6 3.3 7.8 3.4* 4040 11 3/1 13012 Red Lion 7000 57 15.6 12.5 14.4* 13C3 Skalkaho Summit 7259 2/26 55 18.4 21.8 1302 Slide Rock Mountain 7100 2/27 40 11.4 12.8 12.5* 3/1 5.7 1305 Southern Cross 6500 22 7.1 5.0 1307 Storm Lake 7780 2/28 39 12.0 11.6* 11.6 1306 Stuart Mill 6500 3/1 23 6.4 6.4 5.6 Stuart Mountain 1301 7400 3/2 77 17.8 25.9 27.4* 14B1 6800 3/1 TV Mountain 52 14.2 17.2 14.9* BITTERROOT RIVER 12.8 13016 Ambrose 6475 2/25 32 10.6 13D1 East Fork R. S. 22 5.8 6.2 6.5* 5400 3/1 13D2 Gibbons Pass 2/27 55 16.6 19.5 22.2 7100 Lolo Pass 2/25 1405 5230 49 17.5 34.4 32.9* 14C7 Lost Horse 5940 2/27 61 17.8 27.0 16.1 13D16 Moose Creek 2/27 36 12.6 6200 8.0 14D2 Nez Perce Camp 5580 2/28 32 13.8 9.0 12.4* 14D1 2/28 33 16.8* Nez Perce Pass 6575 9.0 14.4 4230 2/25 1406 Powell R. S. 21 7.3 13.7 14.6* 2/25 52 14C4 Savage Pass 6600 18.6 24.2

6510

2/27

88

27.3

36.2

Twin Lakes

1408



AS OF MARCH 1, 1963

		AS OF MA	mon I, I	.90)			(Inches)
			(URRENT DATA		PAST	RECORD
	SNOW COURSE		DATE	SNOW DEPTH	WATER CONTENT	WATER	CONTENT
NO.	NAME	ELEVATION	SURVEY	DETTI	CONTENT	LAST YEAR	AVERAGE
		MISSOURI	RIVER B	ASIN			
BEAVERHI	EAD RIVER						
13D10 12E3 12D4 13D9 11E12 11E4 11E3 13E1 13E2 12E1	Bloody Dick Camp Creek Carter Creek Gold Stone Kilgore Lakeview Canyon Lakeview Ridge Lemhi Pass Trail Creek White Pine Ridge	7600 6800 7400 8100 6200 6930 7400 7480 7090 8850	2/26 2/26 2/27 2/26 2/27 2/27 2/27 2/25 2/25 2/22	30 13 13 40 15 25 21 23 20 16	7.6 3.0 2.6 10.8 3.6 5.8 5.6 6.0 4.6 2.8	9.8 9.2 - 13.4 12.1 12.6 10.7 7.0 6.1 4.8	10.0* 9.2 - 12.9* 9.5 10.5* 8.9* 7.5* 6.7* 4.6*
RUBY RIV	<u>/ER</u>						
11D8 12E7 12E6	Clover Meadow Divide Notch	8600 7 900 8500	2/22 2/22 2/22	37 23 28	8.6 6.4 7.0	- - -	- -
BIG HOLE	E RIVER						
13D20 13D19 13D15 13D21 13D8	Abundance Lake Darkhorse Lake Elk Horn Springs Foolhen Jahnke Creek	8800 8600 8000 8500 7340	2/22 2/22 2/27 2/22 2/26	47 60 34 41 24	12.2 17.9 7.7 12.3 6.1	10.1	- 9.1 - 9.4*
<u>JEFFERSO</u>	ON RIVER						
1207 1206 12D1	Berry Meadow Picnic Grounds Pipestone Pass	7300 6500 7200	2/28 3/1 3/1	24 21 19	6.4 4.6 4.4	8.0 5.1 5.3	- 4.7* 4.4



		AS OF MAI					tinches
				CURRENT DATA		Y PAST F	RECORD
	SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION	SURVEY			LAST YEAR	AVERAGE
MADISON RIVER							
11E9 11D7 11D6 11E5 11E10 11D5 10E2 11D3 11E8 11E7	Big Springs Call Road Crockett Lake Hebgen Dam Island Park Jack Creek Norris Basin North Meadow Valley View West Yellowstone	6500 8050 8400 6550 6315 6800 7500 7500 6500 6700	2/27 2/22 2/22 2/27 2/27 2/27 2/27 2/27	35 30 31 29 31 21 33 20 32 23	9.2 6.8 7.4 6.4 7.8 5.0 8.1 5.3 4.9	22.8 - 12.1 17.6 7.0 9.9 9.6 15.8 15.0	20.4 - 11.2 15.8 - 9.3* - 13.4* 11.3
GALLATIN	RIVER						
10D4 10D3 10D1 11E6	Devil ³ s Slide Hood Meadow New World Twenty-One Mile	8100 6600 6700 7150	3/2 3/2 2/23 2/28	72 36 29 32	19.8 9.7 8.2 7.6	21.8 9.4 9.0 19.0	16.3 7.2 8.3* 16.0
MISSOURI	RIVER (Main Stem)						
1205 901 1007 1002 1001 9A1 1201 1202 1203 1204	Chessman Reservoir Crystal Lake Elk Peak Grasshopper Kings Hill Rocky Boy Stemple Pass Tenmile, Lower Tenmile, Middle Tenmile, Upper	6200 6100 8000 7000 7500 5200 6900 6250 6800 8000	2/26 3/1 2/27 2/27 2/26 3/1 2/27 2/26 2/25 2/25	7 51 42 17 30 24 27 17 29 36	2.1 15.4 12.5 5.2 6.7 6.2 7.1 5.0 8.4 10.6	3.3 12.1 - 5.5 10.1 4.4 9.1 6.6 9.0 11.5	4.3 9.9 - 4.3 11.5 4.8 9.2 6.3 9.2 11.9
SUN-TETO	N-MARIAS RIVERS						
12B8 12B6 12B9 12A1 12B5 12B7 12B2 12B1 12B4 12B3	Benchmark Cabin Creek Five-Bull Freight Creek Gates Park Goat Mountain Waldron Creek West Fork Wrong Creek Wrong Ridge	5500 5400 5600 6000 5300 7000 5600 6000 5700 6800	2/19 2/22 2/19 2/20 2/22 2/28 2/19 2/20 2/22 2/22	9 14 4 32 19 23 10 21 27 42	2.4 4.3 0.9 8.7 3.8 6.6 2.8 6.3 7.8 11.3	7.5 8.3 5.6 12.7 10.4 11.8 4.6 - 14.8 17.5	8.1* 6.8* 6.2* 14.9* 9.9* 10.7 6.5* 14.0* 14.8* 20.4*



	AS OF MARCH 1, 1903						(Inches)	
			CURRENT DATA			PAST RECORD		
SNOW COURSE			DATE	SHOW	WATER	WATER	CONTENT	
NO.	NAME	ELEVATION	OF SURVEY	DEPTH	CONTENT	LAST YEAR	AVERAGE	
JUDITH 1	RIVER							
1006	Spur Park	8000	2/28	52	14.5	-	-	
MILK RIVER (Cypress Hills)								
10AA2 9AA1 10AA1 7AA1	Cress Day B Cypress Park C Elkwater Lake A Val Marie D	3450 4000 4100 2700	3/4 3/4 3/4 3/5	2 9 8 0	0.8 3.4 1.9 0.0	0.4 2.2 0.8 1.4	1.8* 5.2* 2.7* 1.5*	
UPPER Y	ELLOWSTONE RIVER							
1005 9D1 10E3 10D5 10E6 9D3 9D5 10D6 10E4 9E1 10E1 10D12 10D7	Bald Ridge Camp Senia Canyon Crevice Mountain East Entrance Gertrude Lake Grizzly Peak Independence Lake Camp #2 Lodgepole Lupine Creek Monument Peak Northeast Entrance	7500 7890 7750 8400 7000 9250 8400 8000 7850 8200 7300 9000	2/26 3/4 2/28 3/1 2/28 3/4 2/28 2/25 2/27 3/1 2/27 2/25	33 22 42 34 36 41 45 47 23 37 25 58	9.5 4.7 10.2 7.1 8.0 10.4 12.8 13.8 4.4 8.7 5.4 14.9	9.9 7.9 16.3 8.5 8.9 14.8 22.2 18.4 12.0 9.7 12.4 25.6	- 5.5* 13.8* 8.2 10.8* - 13.7* 10.0 10.6* 9.4*	
10C3 10D10 10E5 10E7 9D4 9D2	(Cooke City) Porcupine R. S. Sacajawea Sylvan Pass Thumb Divide Timberline Creek West Rosebud	7400 6500 6550 7100 7900 8850 7500	2/28 2/26 3/4 2/28 2/27 3/4	30 22 44 38 48 38 No Repo	7.4 5.8 12.4 8.7 12.8 9.8	8.1 8.0 11.2 10.5 24.5 18.0 10.4	7.8 5.9 - 13.4* 21.4*	



RESERVOIR STORAGE DATA

AS OF FEBRUARY 28, 1963

	AS OF	· rednuani 2	J, 1707		(1000 Acre Feet)				
			USEABLE STORAGE						
BASIN	RESERVOIR	USEABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE				
COLUMBIA RI	VER BASIN								
Flathead	Hungry Horse Flathead Lake Camas <u>1</u> / Mission Valley <u>2</u> /	3,428.0 1,791.0 45.2 100.3	2,772.0 1,126.0 28.1 31.0	2,172.0 806.5 26.5 24.2	2,369.0** 768.2 25.1 35.5				
Clark Fork	Georgetown Lake Noxon	31.0 334.6	24.9 297.9	22.6 251.5	23.0				
Bitterroot	Como	34.9	22.8	13.8	10.7				
MISSOURI RI	MISSOURI RIVER BASIN								
Beaverhead Ruby Madison Gallatin Missouri	Lima Ruby Hebgen Lake Ennis Lake Middle Creek Canyon Ferry Hauser & Helena Lake Helena Holter Lake Smith River Ackley Lake Durand Martinsdale Deadman's Basin Fort Peck	84.0 38.8 384.8 41.0 8.0 2,043.0 61.9 10.4 81.9 10.7 5.8 7.0 23.1 72.2 19,410.0	24.5 22.5 249.0 39.3 4.7 1,973.0 45.5 5.0 58.7 8.2 3.7 6.4 8.6 52.5	16.5 23.2 109.6 38.8 2.5 1,285.0 44.1 4.6 51.8 2.2 - 1.4 1.5 10.0 8,185.0	32.8 27.2** 213.9 35.9 3.8** 1,558.0** 53.8 8.1** 59.2 5.6** 3.9 4.9 9.8 46.9** 11,178.0				
Sun-Teton	Gibson Willow Creek Pishkun	105.0 32.3 32.0	43.0 25.7 18.3	39.0 10.6 17.0	63.3 19.2 18.8				
Marias	Lower Two Medicine Four Horns Swift Lake Francis Tiber	16.6 19.2 30.0 112.0 1,313.0	0 14.3 12.6 65.6 650.2	0 14.0 16.8 76.0 613.3	0 8.6 23.1 94.6 632.7**				
Milk	Fresno Nelson Lake Sherburne	127,2 66,8 66,1	43.4 44.4 36.3	17.3 15.2					
Yellowstone	Mystic Lake Tongue River Cooney	20.8 68.0 27.5	8.6 43.7	7.4 52.4 15.1	8.6 9.0 9.1				

^{1/} Sum of four small reservoirs on west side of Flathead Lake.

^{2/} Sum of eight small reservoirs in Mission Valley not including Jocko Lake.



Agencies Cooperating in Collecting Data Contained in this Bulletin

- U. S. Forest Service Region I, Missoula, Montana
- U. S. Geological Survey Helena, Montana
- U. S. Army Corps of Engineers Portland, Oregon Seattle, Washington Omaha, Nebraska Riverdale, N. D.
- U. S. Indian Irrigation Service St. Ignatius, Montana
- U. S. Weather Bureau Helena, Montana
- U. S. Fish & Wildlife Service Red Rock Lakes Refuge Monida, Montana
- U. S. Bureau of Reclamation Billings, Montana Boise, Idaho
- Montana Power Company Butte, Montana
- Agricultural Experiment Station North Montana Branch Station Havre, Montana
- State Water Conservation Board Helena, Montana

- National Park Service Yellowstone National Park Glacier National Park
- Montana Experiment Station Montana State College Bozeman, Montana
- Bonneville Power Administration Portland, Oregon
- Montana State School of Forestry Montana State University Missoula, Montana
- Soil Conservation Service Montana, Wyoming, Idaho
- Soil Conservation Districts
 Montana Counties
- Johnson Flying Service, Inc. Missoula, Montana
- Water Rights Branch
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- Department of Northern Affairs & National Resources Calgary, Alberta
- State Engineer
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